

CLAIMS

We claim:

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1. A system for producing alternating current electric energy comprising:
 - (a) at least one industrial gas turbine for producing electric power; and
 - (b) at least one aeroderivative gas turbine for producing electric power.

 2. The system of claim 1, further including at least one steam turbine, said steam turbine in thermodynamic communication with at least one of said industrial gas turbine or aeroderivative turbine such that the exhaust heat from the turbine is used by the steam turbine to generate electric power.

 3. The system of claim 2, further including at least one heat recovery steam generator in thermodynamic communication with at least one said industrial turbine or aeroderivative turbine for providing steam to said at least one steam turbine.

 4. The system of claim 3, wherein the heat recovery steam generator includes supplementary firing equipment.

 5. The system of claim 1, wherein said aeroderivative turbines are used to produce power until said industrial turbines are producing adequate power output, at which time the aeroderivative turbines may be shut down.

 6. The system of claim 1, wherein the industrial turbine is optionally left on-line and is used to keep all the HRSGs in a state of hot stand by for enhanced system start/stop cycling duty capabilities.

 7. The system of claim 3, wherein the aeroderivative gas turbine is left online and used to keep said heat recovery steam generator in a state of hot stand by for enhanced system start/stop cycling duty capabilities.

 8. A system for producing alternating current electric energy comprising:

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- 5 (a) at least one industrial gas turbine for producing electric power;
- (b) at least one aeroderivative gas turbine for producing electric power;
- (c) at least one steam turbine, said steam turbine in thermodynamic communication with at least one of said industrial gas turbine or aeroderivative turbine such that the exhaust heat from the turbine is used by the steam turbine to generate electric power;
- (d) a heat recovery steam generator with supplementary firing equipment associated with each industrial gas turbine and aeroderivative turbine for providing high temperature, high pressure steam to said at least one steam turbine;
- (e) a fuel system for providing fuel to the industrial turbines, aeroderivative turbines and heat recovery steam generators; and
- (f) a water system for providing a suitable water supply to the steam turbines and the heat recovery steam generators.

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